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marrow injury. The porphyrinuria is most intense in the presence of a bone marrow inhibition with the simultaneous appearance of a myelocytic shift in the bone marrow. This observation renders it not improbable that the porphyrinuria is to be connected with the primary disturbance in the bone marrow. The cardiovascular and central nervous injuries are interpreted as signs of porphyrin poisoning.

Ruth Berggren

Miners' nystagmus. D. L. Davies. *Lancet* 1940, I, 573; *Zentr. Gewerbehyg. Unfallverhüt.* 27, 238(1940).—Miners' nystagmus is not considered to be a psychoneurosis. The illumination theory is also disputed. It is believed to be a form of chronic poisoning, caused either by bacteria or gases.

Ruth Berggren

Physical diagnosis of radium poisoning. I. Franke. *Fundamenta Radiol.* 5, 113(1939); *Zentr. Gewerbehyg. Unfallverhüt.* 27, 124(1940).—The occurrence and course of Ra poisoning and the size of the toxic dose are considered. The necessary conditions for a method of diagnosis of Ra poisoning or for the supervision of those exposed to Ra have been studied. Detn. of the intensity and distribution of the Ra deposits by the γ -radiation emitted by the radioactive substances constitutes the most exact and certain method. A method is described which permits the detn. of Ra deposits in amts. of 0.2 μ g. Ra-element or more in a few min. An app. for carrying out the practical diagnosis of Ra deposition is described and the application is explained.

Ruth Berggren

Röntgen study of the fine structure as a method of medical investigation. Gärtner. *Reichsarbeitsblatt* [N. F.], 20, III, 193(1940); *Zentr. Gewerbehyg. Unfallverhüt.* 27, 229(1940); cf. C. A. 33, 7428^c.—Quartz, fluorite, calcite, kaolin, clay, sillimanite, Carborundum, corundum and sericite, grindings of Main, Palatinat, Taunus and Eifel sandstone, dusts of MnO₂, Thomas slag, limestone and tobacco and grindings from the Solinger works were studied with a Mikro-Metalix-Röntgen fine-structure app. (Firma C. H. F. Müller). Tobacco dust from a tobacco factory was found to contain 20% insol. silicic acid. Dust from the lungs of miners, grinders and porcelain workers was also studied and compared in some cases with the industrial dust. A satisfactory diagnosis could almost always be obtained; it could, in part, be confirmed by chem. analyses. In some instances, only kaolin or sillimanite, without the participation of the free silicic acid, could be suspected as the cause of the silicosis. A quant. diagnosis is theoretically possible but meets with practical difficulties.

Ruth Berggren

Pathological anatomy and pathogenesis of asbestosis. Giacomo Mottura and Emanuele Pagano. *Rass. med. ind.* 11, 233-84(1940); *Zentr. Gewerbehyg. Unfallverhüt.* 27, 229-30(1940).—Two fatal cases of asbestosis are described in detail: one occurred after 30 years of uninterrupted work in an asbestos plant, the other after 7 years of work followed by an interval of 30 years. This 2nd case would indicate that a relatively early change of work is of little value. Since asbestos particles were still present after many years and since no connection could be found between the no. of asbestos particles and the degree of fibrosis, the theory of the development of fibrosis by soln. of the asbestos particles, followed by chem. reaction, is considered incorrect. The lymph corpuscles do not indicate any essentially sclerotic changes. The difference between these and silicotic changes is clearly shown. A relation between tuberculosis and asbestosis is not considered probable but a connection with the development of lung cancer is believed possible.

Ruth Berggren

Recent questions in industrial hygiene. III. Dust. O. Ehrismann. *Deut. med. Wochschr.* 1939, II, 1281; *Zentr. Gewerbehyg. Unfallverhüt.* 27, 181(1940); cf. C. A. 36, 3287^b.—Previous results of the study of silicosis, asbestosis, Thomas-slag pneumonia, and Mn and other dust injuries are given.

Ruth Berggren

Use of the acidity quotient of the urine in the selection of stone cutters and those endangered by stone dust. A. Wiesinger. *Vertrauensarzt. u. Krk. kasse* 7, 229(1939); *Zentr. Gewerbehyg. Unfallverhüt.* 27, 181(1940).—The de-

on the tissue acidosis; in acid lung tissue the dissolved silicic acid exerts a nonspecific acid irritation in addn. to its special irritant action, while in the alk. tissue the silicic acid, which gradually dissolves, is neutralized and excreted as a salt through the kidneys. A concept of tissue acidosis is outlined and a suitable method for detg. the acid-base ratio in the tissues is established. On the basis of this method, numerous examples are given which show that the acidity quotient is increased in stone cutters with severe silicosis, while low or neg. acidity quotients predominate in those with mild symptoms of silicosis, in spite of working with stone for years. The relation of the tissue acidosis to the pyknic habitus and mode of nutrition is illustrated with addnl. examples. The diet of those exposed to stone dust should be predominantly alk. and markedly severe phys. work should be avoided because of the increase in lactic acid. In severe pneumoconiosis with diminution of the alveolar surface and subsequent cardiac insufficiency, however, the combustion is lowered in consequence of O deficiency and a lasting tissue acidosis results.

Ruth Berggren

Industrial application of a method for determining the thoron content of air. R. D. Evans, S. J. Nilson, C. Goodman and N. R. Bernz. *Ber. 8. intern. Kongr. Unfallmed. u. Berufskrankh.* 2, 1006(1939); *Zentr. Gewerbehyg. Unfallverhüt.* 27, 124(1940); cf. C. A. 34, 4334^d, 4977^b, 5102^b.—A new instrument is described for the detn. of the Tn content of the air. Practical expts. in various factories with analytical evaluation in the lab. showed a Tn content of the air in individual locations in plants which was 100-1000 times higher than that which is ordinarily considered harmless. In such cases adequate ventilation should be provided.

Ruth Berggren

Plastic molding. Leo Gusman and Murray H. Reich. *City Coll. Vector* (N. Y.) 5, 40-1, 52(1942).—Descriptive. The high first cost of molds and dies in both the compression and the injection processes is one of the largest items of expense in plastic molding. The use of plastic materials, as polystyrene, and synthetic rubbers, as the molds, opens new possibilities and new economies in the field of plastic molding.

Leopold Schefflan

Synthetic-resin molding materials. E. Matuscheck. *Fördertechnik* 32, 261, 385(1939); *Zentr. Gewerbehyg. Unfallverhüt.* 27, 235(1940).—A detailed article on the compn., manuf. and working up of molding materials and their many forms of use.

Ruth Berggren

The thermal and electrical properties of bitumastic compounds containing quartz sand. Willis Jackson. *Phil. Mag.* 33, 81-9(1942).—An increase in the thermal cond. without appreciable detriment to the elec. properties is obtained by incorporating sand into compns. of the bitumastic type used as insulators. Data are reported for expts. made on 3 types of bitumastic compn. The addn. of 80% sand by wt. reduces the thermal resistance to less than one sixth of its normal value for any particular bitumastic. The effect of the sand grain size on the thermal resistivity is small. The dropping and pouring temps. begin to rise rapidly when the sand content reaches 70%. Quartz sand decreases the dielec. strength, but not by an objectionable amt. The power factor is increased, owing probably to moisture adsorption.

S. Tolansky

Properties of heat-insulating materials. E. A. Allcut and D. H. Hamly. *Eng. J.* 24, 514-24(1941).—A discussion of the character of heat-insulating materials, the difficulties in detg. their relative value experimentally, the effect of air spaces and surface resistance and the possibility of saving fuel by taking advantage of solar radiation and heat stored in the structure of the building itself.

J. M. Noy

Production of dermatine on calenders. P. M. Bogatyrev and G. G. Petrzhek. *Nauch.-Issledovatel. Raboty Lab. Glavtekhnikani* 1939, 105-12; *Khim. Referat. Zhur.* 1940, No. 4, 121.—Dermatine was prepd. on differential 3- and 4-roller calenders, with moleskin, duck, canvas and cambric as foundation. Best results were obtained by using 100 parts of colloxylin, 80 parts of dibutyl phthalate, 40 parts of castor oil, 100 parts of alc. and 125 parts